

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



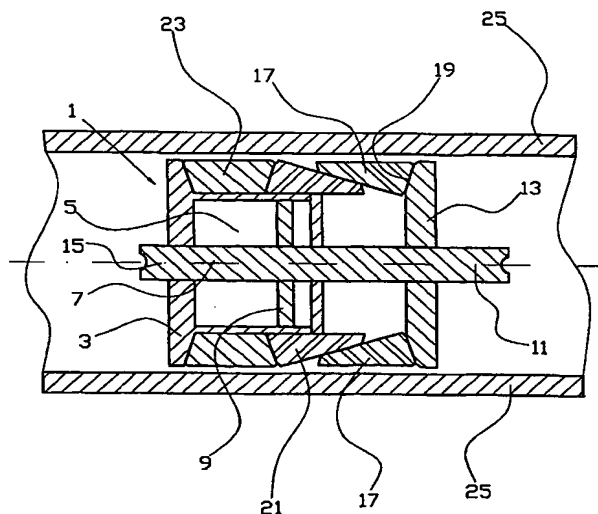
(43) International Publication Date  
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number  
**WO 2004/003421 A1**

- (51) International Patent Classification<sup>7</sup>: **F16L 55/128**
- (21) International Application Number:  
PCT/NO2003/000203
- (22) International Filing Date: 19 June 2003 (19.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
20023100 26 June 2002 (26.06.2002) NO
- (71) Applicant (for all designated States except US): **PLUG-  
GING SPECIALISTS INTERNATIONAL ASA**  
[NO/NO]; Fabrikkeveien 15, N-4033 Stavanger (NO).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **SYSE, Harald**  
[NO/NO]; Påskhusvegen 24, N-4052 Røyneberg (NO).
- (74) Agent: **ONSAGERS AS**; P.O. Box 6963 St. Olavs plass,  
N-0130 Oslo (NO).
- (81) Designated States (*national*): AE, AG, AL, AM, AT (util-  
ity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (util-  
ity model), DE, DK (utility model), DK, DM, DZ, EC, EE  
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,  
RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: ARRANGEMENT AT A HYDRAULIC CYLINDER ON A MANOEUVRABLE PLUG FOR PLUGGING OF PIPES



(57) **Abstract:** An arrangement at a plug for sealing of liquid- or gas-carrying pipes, comprising a main section (1) having one or more axially arranged hydraulic cylinders (5), fastening devices (13, 17, 21) and sealing surfaces (3, 23), where the piston rod (9) of the hydraulic cylinder (5) is through-going and comprises ball joints (27) at the ends (11, 15) of the piston rod, as well as predominantly axial bores for the passage of cables, liquid and gas. A method of fastening and releasing a plug for sealing of liquid- or gas-carrying pipes, comprising at least two interconnected main sections (1) having one or more axially positioned hydraulic cylinders (5), fastening devices (13, 17, 21) and sealing surfaces (3, 23), where the main sections (1) have a fixed mutual spacing that is not affected by the movement of the cylinders (5), and which may be fastened or released in an arbitrary sequence.